UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/507,526	02/18/2000	Stephane H. Maes	Y0999-178 (8728-306)	7963

			EXAMINER
46069	7590	11/29/2005	HO, ANDY

F. CHAU & ASSOCIATES, LLC
130 WOODBURY ROAD
WOODBURY, NY 11797

ART UNIT	PAPER NUMBER
2194	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _02 September 2005_ .

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-37_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-37_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _3/7/2005_ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

DETAILED ACTION

1. This action is in response to the response filed 9/2/2005.

2. Claims 1-37 have been examined and are pending in the application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-15 and 19-37 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hashimoto U.S Patent No. 6,119,147.

As to claim 1, Hashimoto teaches a system comprising:

a program storage device (a computer, line 38 column 3) that stores a multi-

modal application (combination of SRS 1 and application programs 2, Fig. 6), the multi-

modal application comprising at least a first and a second mode process (inputs and

outputs from the application programs, lines 23-25 column 41; speech synthesis unit

operated as an independent process, lines 37-38 column 42) that enables user

interaction with the application in a first modality and second modality (the system

allows the user to interact with the system via text data or speech data, lines 50-63

column 49; Figs. 17, 66, and 69-72);

a program execution system (speech recognition interface system, lines 11-12 column 10) that executes the multi-modal application and synchronizes the first and second mode processes while a user interacts with the multi-modal application (lines 12-37 column 10) wherein the program execution system comprises:

a multi-modal shell (11, Fig. 56) that manages information exchanges between the processes (controls by exchanging the messages transmitted from the speech unit to the application program, lines 38-41 column 10) to enable a synchronized multi modal interaction with the application (the system allows the user to interact with the system via text data or speech data, lines 50-63 column 49; Figs. 17, 66, and 69-72) wherein user interaction in one modality results in execution of corresponding commands in both the first and second mode processes (lines 38-63 column 49);

the processes register their respective active commands and corresponding actions (register the recognition vocabularies and the appropriate actions that response to these vocabularies, line 48 column 10 to line 10 column 11) with the multi model shell (11, Fig. 56).

Hashimoto does not explitcitly teach an API. However, Hashimoto teaches that each application program includes a message I/O unit (line 9-29 column 12) wherein all of the application program interactions with the speech recognition system are handled by this message I/O unit. Therefore one of ordinary skill in the art would conclude that this message I/O unit could be used as an API since it provides the interface for each application program to interact with the speech recognition system.

As to claim 2, Hashimoto as modified further teaches a registry having a

registration table (program management table, line 58 column 10), managed by the

multi-modal shell (11, Fig. 56), that comprises a list of each of the registered commands

and corresponding synchronized actions (the recognition vocabularies and the

appropriate actions that response to these vocabularies, line 48 column 10 to line 10

column 11) that results in both the first and second mode processes upon execution of

a registered command (once the speech input "Finish" is transmitted, both of the

application program can be finished by this single speech input, lines 5-8 column 27) by

one of the first and second mode processes (inputs and outputs from the application

programs, lines 23-25 column 41).

As to claim 3, Hashimoto as modified further teaches the multi-modal

application comprises a first mono-mode application (speech synthesis unit, line 37

column 42) for the first mode process and a second mono-mode application (application

program, lines 41-42 column 42) for the second mode process, wherein the multi-modal

shell (11, Fig. 56) manages and synchronizes information exchanges (message

exchanges using the process communication, lines 39-40 column 42) between the first

(speech synthesis unit, line 37 column 42) and second mono-mode applications

(application program, lines 41-42 column 42).

As to claim 4, Hashimoto as modified does not teach devices having user

interface modalities. However, Hashimoto teaches (lines 51-55 column 12) the

message system can be implemented as a server and clients system wherein the

speech recognition unit can act as a server and the applications programs are clients.

Therefore one of ordinary skill in the art would conclude that the clients are the devices with modalities wherein these devices can register their commands and corresponding actions with the server.

As to claim 5, Hashimoto as modified further teaches the devices multi-modal shell are distributed over a network (server and client system, lines 51-55 column 12), and wherein the API is implemented using distributed APIs or protocols (byte stream type protocol, lines 54-55 column 12).

As to claim 6, Hashimoto as modified further teaches a mechanism for converting a mono-mode application to a multi modal application (application program 5 is interact with both speech input and keyboard input, Fig. 17).

As to claim 7, Hashimoto as modified further teaches the mono-mode application is a GUI application (user interface of Fig. 18), the mechanism (11, Fig. 56) provides speech enablement (controls by exchanging the messages transmitted from the speech unit to the application program, lines 38-41 column 10) of the GUI application (user interface of Fig. 18) by registering the active commands of the GUI application and building a grammar for the registered commands to support the commands in a speech modality (register the recognition vocabularies and the appropriate actions that response to these vocabularies, line 48 column 10 to line 10 column 11).

As to claim 8, Hashimoto as modified further teaches a mechanism for building a multi-modal application (application program 5 is interact with both speech input and keyboard input, Fig. 17).

As to claim 9, Hashimoto as modified further teaches the mechanism (11, Fig.

56) is used for directly programming the registry by building a registration table

(program management table, line 58 column 10) having user-defined commands and

corresponding actions (the recognition vocabularies and the appropriate actions that

response to these vocabularies, line 48 column 10 to line 10 column 11) for each of the

modalities of the multi-modal application (1A, Fig. 56).

As to claim 10, Hashimoto as modified further teaches that the system is

implemented on personal computers, workstations...(lines 8-12 column 1). Hashimoto

does not explicitly disclose an operating system. "Official Notice" is taken that both the

concept and advantage of providing for an operating system is well known and

expected in the art. It would have been obvious to include an operating system into the

system of Hashimoto because it would provide the execution space for the system.

As to claim 11, Hashimoto as modified further teaches the system is distributed

over a network (server and client system, lines 51-55 column 12).

As to claim 12, Hashimoto as modified further teaches the multi-modal

application (1A, Fig. 56) is a multi-modal browser (a mail browser, Fig. 27), comprising

first and second browser applications (multiple application programs 2, Fig. 7).

As to claim 13, Hashimoto as modified further teaches the first browser is GUI

(interface of Fig. 27) and the second browser is speech (the user can command to open

the mail by saying "yes", lines 54-60 column 25).

As to claim 14, Hashimoto as modified further teaches the multi-modal shell (11,

Fig. 56) processes the multi-modal application (recognition result, line 16 column 25) to

send modality specific presentation information (speech result from the speech

recognition system, lines 14-17 column 25) to the respective browsers (a mail browser,

Fig. 27).

As to claim 15, Hashimoto as modified further teaches the multi-modal

application is authored using a modality-independent description and wherein the multi-

modal shell generates (recognition result, line 16 column 25) the modality-specific

presentation information (speech result from the speech recognition system, lines 14-17

column 25) from the modality-independent description (input speech, line 12 column

25).

As to claim 19, Hashimoto teaches a method comprising:

activating a multi-modal application (combination of SRS 1 and application

programs 2, Fig. 6) comprising at least a first mode process (inputs and outputs from

the application programs, lines 23-25 column 41; speech synthesis unit operated as an

independent process, lines 37-38 column 42) that enables user interaction with the

application in a first modality (the system allows the user to interact with the system via

text data or speech data, lines 50-63 column 49; Figs. 17, 66, and 69-72) and a second

mode process (inputs and outputs from the application programs, lines 23-25 column

41; speech synthesis unit operated as an independent process, lines 37-38 column 42)

that enables user interaction with the application in a second modality (the system

allows the user to interact with the system via text data or speech data, lines 50-63

column 49; Figs. 17, 66, and 69-72);

receiving a command (speech input, line 14 column 41) in a first modality
(speech recognition interface system, line 13 column 41);

triggering an action (speech output, line 19 column 41) in the first mode process
based on the received command (speech recognition interface system, line 13 column
41) and triggering a corresponding action (the mail is opened when the user saying
"yes", lines 54-60 column 25) by the second mode process (application program, lines
41-42 column 42);

updating application state associated with the second mode process (update the
program management data in the program management according to an internal state
of each application program, lines 35-39 column 76).

Hashimoto does not explitcitly teach updating application state associated with
the first mode process. However, Hashimoto teaches (lines 37-46 column 14) the
speech recognition system also has its own internal state; and when there is a change
in this internal state, the application program will get a message notifies about this
change. Therefore one of ordinary skill in the art would conclude that in a certain time,
the internal state of the speech recognition system is updated; therefore produces the
state change.

As to claim 20, Hashimoto as modified further teaches registering active
commands associated with the first and second mode processes (the recognition
vocabularies and the appropriate actions that response to these vocabularies, line 48
column 10 to line 10 column 11); associating, with each registered command of the
mode processes, an action on one mode process and a corresponding action on the

other mode process (once the speech input "Finish" is transmitted, both of the application program can be finished by this single speech input, lines 5-8 column 27).

As to claim 21, Hashimoto as modified further teaches building a command to action registration table (program management table, line 58 column 10) based on the registered commands and actions (the recognition vocabularies and the appropriate actions that response to these vocabularies, line 48 column 10 to line 10 column 11).

As to claim 22, Hashimoto as modified further teaches the registration table (program management table, line 58 column 10) is built by a multi-modal shell (11, Fig. 56). Hashimoto does not explitcitly teach an API. However, Hashimoto teaches that each application program includes a message I/O unit (line 9-29 column 12) wherein all of the application program interactions with the speech recognition system are handled by this message I/O unit. Therefore one of ordinary skill in the art would conclude that this message I/O unit could be used as an API since it provides the interface for each application program to interact with the speech recognition system.

As to claim 23, Hashimoto as modified further teaches looking up the received command (the recognition vocabulary lists, lines 59-60 column 10) in the registration table (program management table, line 58 column 10); and executing the actions associated with the received command on the first and second mode processes (once the speech input "Finish" is transmitted, both of the application program can be finished by this single speech input, lines 5-8 column 27).

As to claim 24, Hashimoto as modified further teaches registering a callback handle for each of the registered commands to notify the first and second mode

processes of completion of the actions corresponding to the registered commands (after

the dictionary production is completed, notifies this act to the data acquisition unit 8 by a

message indicating the completion of the dictionary production, lines 3-5 column 33).

As to claim 25, Hashimoto as modified further teaches executing the callback

handle associated with the received command to trigger callback actions on the mode

processes (after the dictionary production is completed, notifies this act to the data

acquisition unit 8 by a message indicating the completion of the dictionary production,

lines 3-5 column 33).

As to claim 26, Hashimoto as modified further teaches executing first thread

associated with the received command ("Finish", line 6 column 27); triggering a

corresponding second thread to initiate the corresponding action on the second mode

process (once the speech input "Finish" is transmitted, both of the application program

can be finished by this single speech input, lines 5-8 column 27).

As to claim 27, Hashimoto as modified further teaches the threads are applets

("Yes" and "No" icons in Fig. 27).

As to claim 28, Hashimoto as modified further teaches the threads communicate

via socket connections (server and client system (lines 51-55 column 12) with a mail

browser, Fig. 27)).

As to claims 29-37, they are device claims of claims 19-21 and 23-28,

respectively. Therefore, they are rejected for the same reasons as claims 19-21 and

23-28 above.

4. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Hashimoto in view of Toomey U.S Patent No. 6,119,147.

As to claim 16, Hashimoto as modified does not explitcitly teach the multi-modal

application comprises a combination of declarative markup languages. Toomey

teaches a multi-model document with a combination of declarative markup languages

(text discussion, audio commands, graphics, and documents, lines 60-61 column 1). It

would have been obvious to apply the teachings of Toomey to the system of Hashimoto

because this document will provide the user with the convenience of interacting with the

system using the choice of texts or speech commands.

As to claim 17, Toomey further discloses combining the declarative markup

languages and synchronization elements to provide tight synchronization (interactions

are inserted into the multi-modal document at a point that is chronological in the

meeting to create a synchronous meeting, lines 11-13 column 15).

As to claim 18, Toomey further discloses separate files for each of the

declarative markup languages (multiple tracks in the multi-modal document, lines 59-60

column 1).

Response to Arguments

5. Applicant's arguments filed 9/2/2005 have been fully considered but they are

not persuasive.

Applicant argued that the claim features "multimodal application comprising first

and second mode processes" are not addressed (Remarks, third paragraph page 9). In

response, these claim limitations are clearly addressed above wherein Hashimoto

teaches a multi-modal application (combination of SRS 1 and application programs 2,

Fig. 6), the multi-modal application comprising at least a first and a second mode

process (inputs and outputs from the application programs, lines 23-25 column 41;

speech synthesis unit operated as an independent process, lines 37-38 column 42) that

enables user interaction with the application in a first modality and second modality (the

system allows the user to interact with the system via text data or speech data, lines 50-

63 column 49; Figs. 17, 66, and 69-72).

Applicant argued that Hashimoto reference does not teach a multi-modal

application (Remarks, second complete paragraph page 10). In response, as disclosed

in the claims rejection above, Hashimoto teaches the system allows the user to interact

with the application via text data or speech data (lines 50-63 column 49; Figs. 17, 66,

and 69-72). These interactions are being provided via SRS 1 (Fig. 6) acting as an

interface of the application. Therefore, the SRS and the application together made up a

multi-modal application. The reference meets the limitation as claimed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Andy Ho whose telephone number is (571) 272-3762.

A voice mail service is also available for this number. The examiner can normally be

reached on Monday – Friday, 8:30 am – 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Thomson can be reached on (571) 272-3718.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIM) system. Status information for

published applications may be obtained from either Private PAIR or' Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is 571-272-

2100.

Any response to this action should be mailed to:

Commissioner for Patents

P.O Box 1450

Alexandria, VA 22313-1450

Or fax to:

- AFTER-FINAL faxes must be signed and sent to (571) 273 - 8300.

- OFFICAL faxes must be signed and sent to (571) 273 - 8300.

- NON OFFICAL faxes should not be signed, please send to (571) 273 – 3762

A.H
November 22, 2005

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100